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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

SPAR, ILANA L

ART UNIT

PAPER NUMBER

2629

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/589,787	Applicant(s) LIM ET AL.	
	Examiner ILANA SPAR	Art Unit 2629	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 August 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 August 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>8/16/2006</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-3, 9-13, and 18-25 are rejected under 35 U.S.C. 102(b) as being anticipated by Vale (US Patent No. 6,359,572).

With reference to claim 1, Vale teaches a method for protecting a character entered at a graphical interface, said method comprising the steps of:

generating a set of images that form a complete image of a keypad having a button-to-character assignment (see column 14, lines 10-25);

displaying said graphical keypad using said image set (see column 14, lines 10-25); and,

obtaining the character of a selected button using said button-to-character assignment (see column 14, lines 53-54).

With reference to claim 2, Vale teaches all that is required with reference to claim 1, and further teaches the step of repeating said steps in claim 1 to obtain a sequence of characters (see Figure 8, after the key input is handled at step 804 the process begins again with user input).

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With reference to claim 3, Vale teaches all that is required with reference to claim 2, and further teaches the step of generating a different button-to-character assignment for each repetition (see Figure 8, step 816).

With reference to claim 9, Vale teaches all that is required with reference to claim 1, and further teaches that said displaying step comprises the step of displaying the images in said image set sequentially and cyclically (see Figure 8 – the dynamic display is regenerated each time a key is pressed according to the prediction engine).

With reference to claim 10, Vale teaches a computer system for protecting a character entered at a graphical interface, said system comprising:

means for generating a set of images that form a complete image of a keypad having a button-to-character assignment (see column 14, lines 10-25);

means for displaying said graphical keypad using said image set (see column 14, lines 10-25), and,

means for obtaining the character of a selected button using said button-to-character assignment (see column 14, lines 53-54).

With reference to claim 11, Vale teaches all that is required with reference to claim 10, and further teaches means for repeating said steps in claim 10 to obtain a sequence of characters (see Figure 8, after the key input is handled at step 804 the process begins again with user input).

With reference to claim 12, Vale teaches a computer-readable storage medium (see column 2, line 66 to column 3, line 1) having stored therein instructions (see

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column 2, lines 37-40) for performing a method of protecting a character entered at a graphical interface, the method comprising the steps of:

- generating a set of images that form a complete image of a keypad having a button-to-character assignment (see column 14, lines 10-25);

- displaying said graphical keypad using said image set (see column 14, lines 10-25); and,

- obtaining the character of a selected button using said button-to-character assignment (see column 14, lines 53-54).

With reference to claim 13, Vale teaches all that is required with reference to claim 12, and further teaches that said performed method further comprising the step of repeating said steps in claim 12 to obtain a sequence of characters (see Figure 8, after the key input is handled at step 804 the process begins again with user input).

With reference to claim 18, Vale teaches a system for protecting a character entered at a graphical interface, said system comprising:

- a network of computers (see column 2, lines 49-56);

- means for generating a set of images that form a complete image of a keypad having a button-to-character assignment (see column 14, lines 10-25);

- means for displaying said graphical keypad using said image set (see column 14, lines 10-25); and,

- means for obtaining the character of a selected button using said button-to-character assignment (see column 14, lines 53-54).

With reference to claim 19, Vale teaches all that is required with reference to claim 18, and further teaches that said means for generating and obtaining are provided by a computer in said network, and said means for displaying is provided by another computer in said network (see column 2, lines 50-56 – it is clear to one of ordinary skill in the art that if multiple computers in a network can share tasks, the method of claim 18 can be operated such that a remote computer carries out the data generation and processing while a remote display carries out the display and touch screen function).

With reference to claim 20, Vale teaches all that is required with reference to claim 18, and further teaches that said means for generating, displaying and obtaining are provided by multiple computers in said network working together to perform the method of claim 1 with each computer performing at least one of the steps in the method of claim 1 (see column 2, lines 50-56).

With reference to claim 21, Vale teaches all that is required with reference to claim 18, and further teaches means for repeating said steps in claim 18 to obtain a sequence of characters (see Figure 8, after the key input is handled at step 804 the process begins again with user input).

With reference to claim 22, Vale teaches a computer-readable storage medium (see column 2, line 66 to column 3, line 1) having stored therein instructions (see column 2, lines 37-40) for performing a method of protecting a character entered at a graphical interface, the method comprising the steps of:

generating a set of images that form a complete image of a keypad having a button-to-character assignment (see column 14, lines 10-25);

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sending said image set to a remote computer (see column 2, lines 50-56 and column 14, lines 10-25);

receiving a selected button from said remote computer (see column 2, lines 50-56 and column 14, lines 53-54); and,

obtaining the character of said selected button using said button-to-character assignment (see column 14, lines 53-54).

With reference to claim 23, Vale teaches all that is required with reference to claim 22, and further teaches that said performed method further comprising the step of repeating said steps in claim 22 to obtain a sequence of characters (see Figure 8, after the key input is handled at step 804 the process begins again with user input).

With reference to claim 24, Vale teaches a computer-readable storage medium (see column 2, line 66 to column 3, line 1) having stored therein instructions (see column 2, lines 37-40) for performing a method of protecting a character entered at a graphical interface, the method comprising the steps of:

receiving an image set from a remote computer (see column 2, lines 50-56 and column 14, lines 10-25);

displaying a graphical keypad using said image set (see column 14, lines 10-25); and,

sending a selected button to said remote computer (see column 2, lines 50-56 and column 14, lines 53-54).

With reference to claim 25, Vale teaches all that is required with reference to claim 24, and further teaches that said performed method further comprising the step of

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repeating said steps in claim 24 to obtain a sequence of characters (see Figure 8, after the key input is handled at step 804 the process begins again with user input).

3. Claims 16 and 17 are rejected under 35 U.S.C. 102(b) as being anticipated by Braspenning et al. (US Published Patent Application 2002/0009211).

With reference to claim 16, Braspenning et al. teaches a computer-readable storage medium having stored therein instructions for performing a method of generating a set of images from a complete image of a character belonging to a character set, the method comprising the step of distributing the illuminated pixels in said complete image among two or more images based upon pixel group (see paragraph 10, lines 4-6).

With reference to claim 17, Braspenning et al. teaches all that is required with reference to claim 16, and further teaches the steps of:

computing the visible probabilities for all possibly illuminated pixels in a complete image (see paragraph 53); and,

partitioning said pixels into groups based upon visible probability (see paragraph 61, lines 2-7 and paragraph 64, lines 1-6).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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5. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

6. Claims 4-8 and 14-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vale in view of Braspenning et al.

With reference to claim 4, Vale teaches a keyboard display which is a set of character images belonging to a character set (see column 14, lines 10-14).

Vale fails to teach that the set of character images is generated by distributing the illuminated pixels in said complete image among two or more images based upon pixel group.

Braspenning et al. teaches distributing the illuminated pixels in said complete image among two or more images based upon pixel group.

It would have been obvious to one of ordinary skill in the art at the time of invention to distribute the pixels as such when generating images in the method as taught by Vale, as this pixel distribution method results in an enhanced video signal, which provides a better displayed image, as taught by Braspenning et al. (see paragraph 64, lines 9-12).

With reference to claim 5, Vale and Braspenning et al. teach all that is required with reference to claim 4, and Braspenning et al. further teaches that an image in the

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generated image set contains complete, partial or no information of said original image (see paragraph 10, lines 4-6).

With reference to claim 6, Vale and Braspenning et al. teach all that is required with reference to claim 4, and Braspenning et al. further teaches the step of changing said distribution based upon time (see paragraph 10, lines 4-8 for determining motion in an image).

With reference to claim 7, Vale and Braspenning et al. teach all that is required with reference to claim 4, and Braspenning et al. further teaches the steps of:

computing the visible probabilities for all possibly illuminated pixels in a complete image (see paragraph 53); and,

partitioning said pixels into groups based upon visible probability (see paragraph 61, lines 2-7 and paragraph 64, lines 1-6).

With reference to claim 8, Vale teaches the method according to claim 1 (see above), but fails to teach that the generating step is based upon the method as claimed in claim 4.

Braspenning et al. teaches that the generating step is based upon the method as claimed in claim 4 (see paragraph 10, lines 4-6).

It would have been obvious to one of ordinary skill in the art at the time of invention to use the image generating method of Braspenning et al. to determine the motion and depth of an image, which, when known and corrected for, results in an enhanced display, as taught by Braspenning et al. (see paragraph 10 and paragraph 64, lines 11-13).

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With reference to claim 14, Vale teaches a keyboard display of a computer system which is a set of character images belonging to a character set (see column 14, lines 10-14).

Vale fails to teach that the set of character images is generated by distributing the illuminated pixels in said complete image among two or more images based upon pixel group.

Braspenning et al. teaches means for distributing the illuminated pixels in said complete image among two or more images based upon pixel group.

It would have been obvious to one of ordinary skill in the art at the time of invention to distribute the pixels as such when generating images in the method as taught by Vale, as this pixel distribution method results in an enhanced video signal, which provides a better displayed image, as taught by Braspenning et al. (see paragraph 64, lines 9-12).

With reference to claim 15, Vale and Braspenning et al. teach all that is required with reference to claim 14, and Braspenning et al. further teaches:

means for computing the visible probabilities for all possibly illuminated pixels in a complete image (see paragraph 53); and,

means for partitioning said pixels into groups based upon visible probability (see paragraph 61, lines 2-7 and paragraph 64, lines 1-6).

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Maddalozzo Jr. et al. (US Patent No. 6,434,702) teaches

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generating a different button-to-character assignment at each subsequent user's input.

Dostie et al. (US Published Patent Application 2004/0021691) teaches a method of entering data in a computer where the computer adjusts input options based on the input received from the user.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ILANA SPAR whose telephone number is (571)270-7537. The examiner can normally be reached on Monday-Thursday 8:00-4:00 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bipin Shalwala can be reached on (571)272-7681. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Bipin Shalwala/
Supervisory Patent Examiner, Art Unit 2629

ILS